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Term: (scan$4 or read$4 or sensor or ccd) same (control$4 or detect$3 or determin$3 or designat$4) with (fucus or lens) near7 (chart$1 or bar or pattern) with (orientaion or position) same

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DATE: Saturday, March 08, 2003 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT,PGPB,JPAB,EPAB,DWPI; PLUR=YES; OP=OR			
L21	(scan$4 or read$4 or sensor or ccd) same (control$4 or detect$3 or determin$3 or designat$4) with (fucus or lens) near7 (chart$1 or bar or pattern) with (orientaion or position) same (mask or filter) and @ad<20000406	18	L21
L20	(scan$4 or read$4 or sensor or ccd) same (control$4 or detect$3 or determin$3 or designat$4) with (fucus or lens) near7 (detect$3 or determin$3) with (orientaion or position) same (mask or filter) near5 (chart$1 or bar or code or pattern) and @ad<20000406	29	L20
L19	(scan$4 or read$4 or sensor or ccd) with (control$4 or detect$3 or determin$3 or designat$4) near7 (fucus or lens) near7 (detect$3 or determin$3) near6 (orientaion or position) near4 (mask or filter) near5 (chart$1 or bar or code or pattern) and @ad<20000406	2	L19
L18	(scan$4 or read$4 or sensor or ccd) and (auto adj focus or lens) near4 (chart$1 or map or bar) same (detect$3 or determin$3) near5 (mask or filter) with (orientaion or position) and @ad<20000406	0	L18
	(scan$4 or read$4 or sensor or ccd) same (focus or lens or target) with		

L16: Entry 15 of 42 File: USPT Feb 22, 1994

DOCUMENT-IDENTIFIER: US 5288987 A
TITLE: Autofocusing arrangement for a stereomicroscope which permits automatic focusing on objects on which reflections occur

DATE FILED (1):
19920924

Brief Summary Text (10):
The imaging of the light beam through a cylinder lens as a thin bar-shaped marking ensures that the thin bar-shaped marking is projected with maximum intensity on the illuminated object; that is, no intensity reduction results as with mask imaging where only a low percentage of the intensity supplied by the light source reaches the object surface. The registration of the reflected bar-shaped marking is correspondingly easier or more advantageous on the resolving position detector for a brightly illuminated microscope viewing field.

Drawing Description Text (8):
FIG. 3 shows the resolving position detector configured as a two-dimensional CCD-array; and,

Drawing Description Text (9):
FIG. 4 is a schematic of the resolving position detector configured as a linear CCD-array.

Detailed Description Text (6):
In one of the two stereo viewing beam paths, the laser beam reflected from the object surface 11 is decoupled out of the viewing beam path at the receiving end after passing the objective (4a, 4b) via an outcoupling element 15 and is imaged via a further projection lens 16 and a wavelength-dependent filter 17 on a resolving position detector 18. Conventional two-dimensional CCD-arrays or CCD-lines having several individual elements are commercially available and constitute the resolving position detector 18.

Detailed Description Text (15):
In FIG. 3, a resolving position detector is shown configured as a two-dimensional CCD-array 24. An evaluation method for this autofocusing arrangement with the aid of the CCD-array 24 shown comprises first evaluating the individual element (22a, 22b, . . .) line by line to determine the exact position of the image 21 of the bar-shaped marking imaged on the CCD-array 24; that is, the radiation intensity incident on each element is determined. Thereafter, the radiation intensities of the individual elements (22a, 22b, . . .) are averaged column-by-column. In this way, disturbing influences such as interference phenomena still present in the image 21 of the bar-shaped marking on the CCD-array 24 are equalized. On the other hand, the column-by-column evaluation of the radiation intensity incident on the individual elements (22a, 22b, . . .) is likewise possible in order to thereafter average the measured radiation intensities line-by-line. The schematic representation of the image 21 of the bar-shaped marking on the CCD-array 24 is idealized in FIG. 3; that is, in reality, this image 21 has a Gaussian-shaped intensity profile along its transverse dimension.

Detailed Description Text (16):
A further evaluation method for equalizing the disturbing influences when determining the position of the image 21 of the bar-shaped marking provides that a linear CCD-array 25 is used as a resolving position detector as shown in FIG. 4. The individual elements (23a, . . .) of this linear CCD-array 25 define rectangular

L20: Entry 7 of 29 File: USPT Oct 13, 1992

DOCUMENT-IDENTIFIER: US 5155370 A
TITLE: Device for detecting the relative position of first and second objects

DATE FILED (1):
19920116

Detailed Description Text (6):
In FIG. 1A, parallel light emanating from a light source 10 passes through a half mirror 74 and is focused at a point 78 by a condensing lens 76. Thereafter, the light illuminates a mask alignment pattern 3M on a mask M and an alignment pattern 4W on a wafer W which is placed on a support table 62. Each of these alignment patterns 3M and 4W is provided by a reflection type zone plate and functions to form a spot of focused light on a plane perpendicular to an optical axis which contains the point 78. The amount of relative deviation of the positions of these light spots formed on that plane is detected, by directing the focused beams to a surface of a detector (sensor) 8 by means of the condensing lens 76 and another lens 80.

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L21: Entry 1 of 18 File: USPT Dec 26, 2000

DOCUMENT-IDENTIFIER: US 6165692 A
TITLE: Method for manufacturing a semiconductor device and an exposure mask used therefor

DATE FILED (1):
19970819

Detailed Description Text (22):
The construction of the exposure device used in this embodiment is shown in FIG. 7. A reference numeral 21 denotes a light source constructed by an Hg-Xc lamp or KrF, ArF laser, 22 a cold mirror, 23 a narrow-band filter, 24 a fly eye lens, and 25 a selectable aperture inserted in position which is generally called a secondary light source plane. Further, a reference numeral 26 denotes an input lens, 27 a reticule blind for limiting the exposure area of the exposure mask, 28 an output lens, 29 a condenser lens, 31 an exposure mask, 32 a projection optical system for projecting a pattern on the exposure mask 31 on the substrate by a lens, mirror or a combination thereof, 33 an aperture for determining the numerical aperture (NA) inserted in the pupil position of the projection optical system, 34 a wafer substrate, and 35 a wafer stage. Further, a reference numeral 41 denotes an aperture/filter control unit (controller 1), 42 a main control unit (controller 2), 43 a wafer stage control unit (controller 3), 44 a wafer XY position detecting mechanism (sensor 1), and 45 a wafer Z position detecting mechanism (sensor 2).